

Michael O. Leavitt Governor Kathleen Clarke Executive Director

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

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TECHNICAL FIELD VISIT

DATE:

May 18, 1999

DOGM STAFF: ATTENDANTS: Robert Davidson, Sharon Falvey, and Pete Hess

Dave Shaver and Jean Semborski, West Ridge Resources; Bill Engels IPA;

Mark Greenhalgh, Nielson Construction; Pat Johnston.

RE:

Construction of Mine Facilities Area, West Ridge Mine, West Ridge

Resources, Inc., ACT/007/041, Carbon County, Utah

Purpose:

Visit the mine site during early construction to observe temporary sediment control measures, culvert installation, and experimental practices.

Background:

- The Mine Reclamation Plan contains specific measures that will be performed during startup and early construction of the facilities area. These measures include temporary sediment control and utilization of the Experimental Practice for protecting soil resources in-place. The temporary sediment control measures include a temporary sediment basin at the end of the construction site with silt fence installation below the pond outflow. The Experimental Practice for protecting soils in place includes installing geotextile fabric and marker strips separating native undisturbed soils from imported fills.
- In order to evaluate the effects of the geotextile and fill over the existing in-place topsoil resources, a test plot study area will be established in the upper right fork northeast of the topsoil stockpile. The purpose for the test plots is to evaluate the Experimental Practice reclamation plan proposed for the mine yard area. After the test plot area is constructed, the plots will remain intact for five years to simulate the operation phase of the mine yard. Following the five year period, reclamation will be performed on the test plot area to actually implement and test the final reclamation plan in comparison to conventional reclamation techniques. Appendix 2-6 contains a complete discussion of the Experimental Practice test plot plan.

Field Observations:

- Temporary Sediment Control Measures The temporary sediment control measures were completely installed prior to this site visit. The contractor, Mark Greenhalgh, indicated that the temporary pond construction was convenient because there is no maintenance or changes to sediment control measure requirements once constructed. Although the site received precipitation in the previous week, no water was in the pond.
- <u>Culvert Installation</u> The area at the inlet to the culvert was being compacted while elevating the operating pad over the culvert. Installation practices were not noted to be inconsistent with the plan except that the pad area was reduced and culvert entrance was shifted downstream from the original location. Although the construction sequencing was affected from failure to receive a prefabricated culvert the installation sequence appeared to follow the plan. The culvert was not measured to check the size.
- Site Drainage The changes to the pad length in the canyons right fork could change pad

drainage. Dave Shaver indicated the operational drainage would not be affected by this change. There was also some discussion on retaining a permanent road access configured on the topsoil pile to provide one time future access to the test plot. It was recommended that if the operator proceeds in that manner the topsoil below the road be minimized. The potential for multiple times a permanent road would be used was a stated concern. Topsoil Salvage and Preservation - No soil has been salvaged at the site at this point. In the soil salvage "pod" areas for Strych, Brycan and Midfork soils, the construction crews have been using the old road that transects these areas. In addition, they have been using the Brycan and Strych areas as a parking lot. The right fork topsoil stockpile area is nearly constructed, with the culvert installed and fill being brought to final grade. The area should be ready for receiving topsoil by the end of the day. Pat Johnston was briefed on the MRP and was oriented on topsoil salvage areas, colluvium growth medium salvage areas, topsoil stockpile storage areas, colluvium growth medium stockpile areas, and Experimental Practices methodology for topsoil preservation in-place. Experimental Practices' Test Plot Area - The Test Plot area has already been constructed, but not according to the plan. There is a departure from the approved MRP for installation and design. The main issue with the departure from the plan is weight of imported fills and compaction of native undisturbed soils over time before reclamation. The test plot area is not contiguously attached to topsoil stockpile as explained in the MRP, but is separate and located up canyon from the stockpile area. The test plot area does not include the ephemeral drainage as discussed in the MRP, and therefore, no imported fills are used and the culvert is not installed. This would have included up to 8 to 10 feet of imported fills in addition to the native fills used in the test plot design. In addition, as currently installed, reclamation of the test plot areas will no longer include reclamation of the ephemeral drainage, which is a critical part of the experimental practice. In summary, the two critical items that have been impacted from the departure from the plan with the current installation test plots are as follows: - Native Soil Compaction - Compaction of the native soils underneath test plots does not simulate the actual compaction conditions of the experimental practice area. - Ephemeral Drainage - Reclamation of the test plot areas does not include reclamation of the ephemeral drainage, which is a critical part of the experimental practice Experimental Practices' Geotextile and Flagging Ribbon Installation - Within the entire Canyon, vegetation has been stripped from the canyon bottom and sides up to the projected level of fills. Where fills have been and/or will be placed, geotextile and flagging ribbon have been utilized as outlined in the MRP. Within the right fork, geotextile has been utilized across the entire expanse of the canyon, including cover over the Strych soils on the north side of the canyon. The MRP only called for geotextile on the south side and in the ephemeral drainage, but not on the north side. Flagged ribbon was to be used on the north side, but West Ridge felt that protection using the geotextile was more consistent once construction started. This is a departure from the plan, but actually results in greater protection for the Strych soils at this location. Both West Ridge Resources and Nielson Construction expressed that they felt the geotextile would be much more effective in protecting soil in-place than the flagged ribbon. Experimental Practices' Photos - Dave Shaver took some photos of the West Ridge construction site on May 13, 1999 and provided a copy set for the Division. The photos depict construction progress to date and illustrate construction methods used for implementing the Experimental Practices use of ribbing and geotextile placement. These photos are attached to this field report

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Recommendations and Conclusions:

• Topsoil Salvage and Preservation - West Ridge Resources agreed not to allow any further parking of vehicles or vehicle traffic over un-salvaged topsoil areas until topsoil is removed. Pat Johnston will supervise topsoil salvage. The proposal for permanent access across the topsoil pile in the canyons north fork is not part of the plan. No site approvals were obtained for the permanent road on the topsoil pile as this concept does not follow the plan. Approval for a permanent access road needs to be obtained by amending the plan. Note, plan contains approval for a temporary access road, but not a permanent road.

Experimental Practices' Test Plot Area - In order to evaluate the effects of the departure from the MRP, both the Division and OSM will review the currently installed test plots. This will include a site visit by OSM on June 3 and 4. A determination will be made if the installed test plots will be effective for evaluating the Experimental Practice's reclamation plan as explained in the MRP, or if additional plots will need to be installed that will follow the designs as

contained in the MRP.

Signature:

Robert A. Davidson, Senior Reclamation Specialist

on May 21, 1999

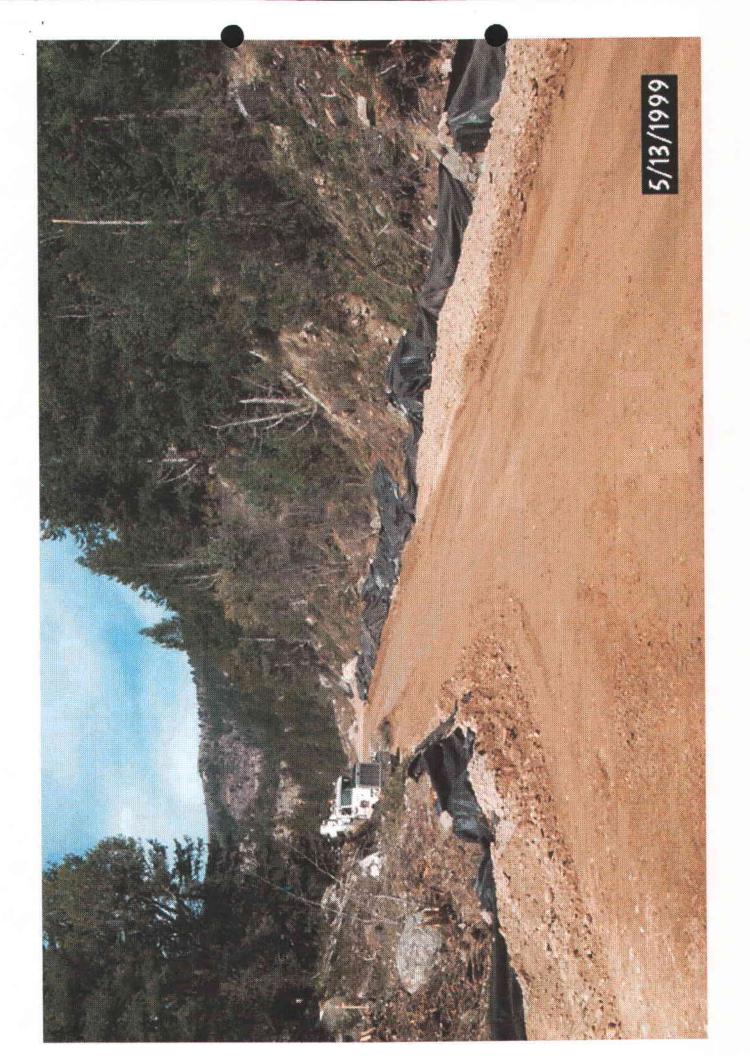
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Sharon Falvey, Senior Reclamation Specialist

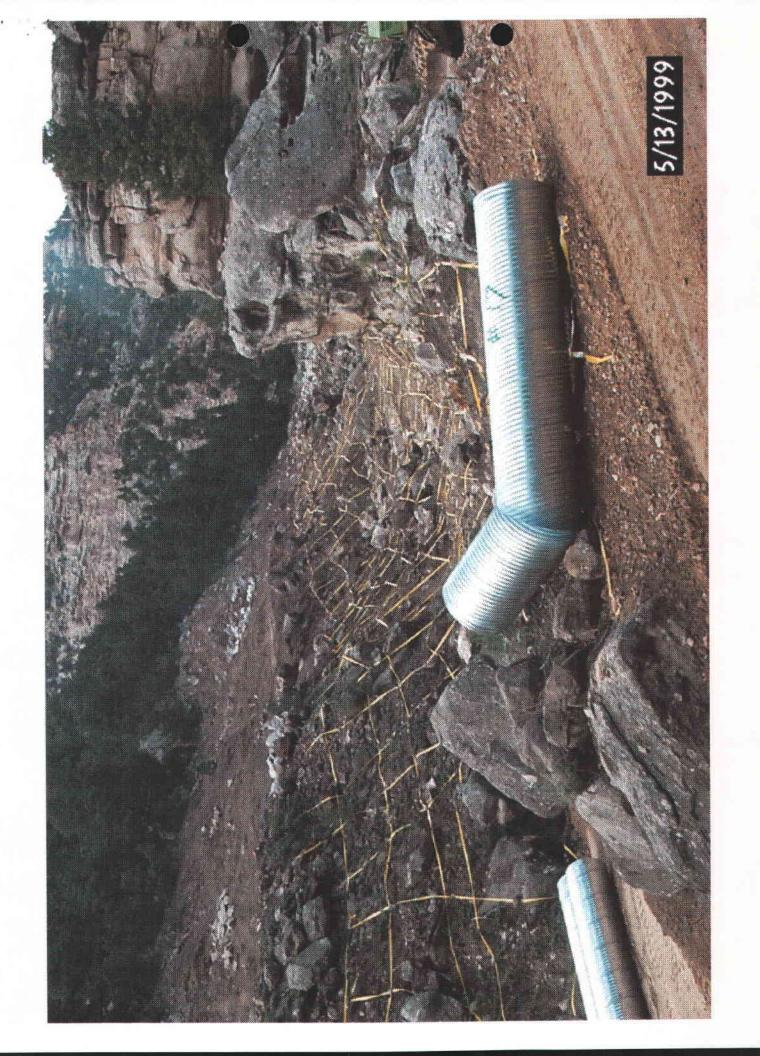
on May 21, 1999

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Paul Baker
Mary Ann Wright
Bob Postal, OSM
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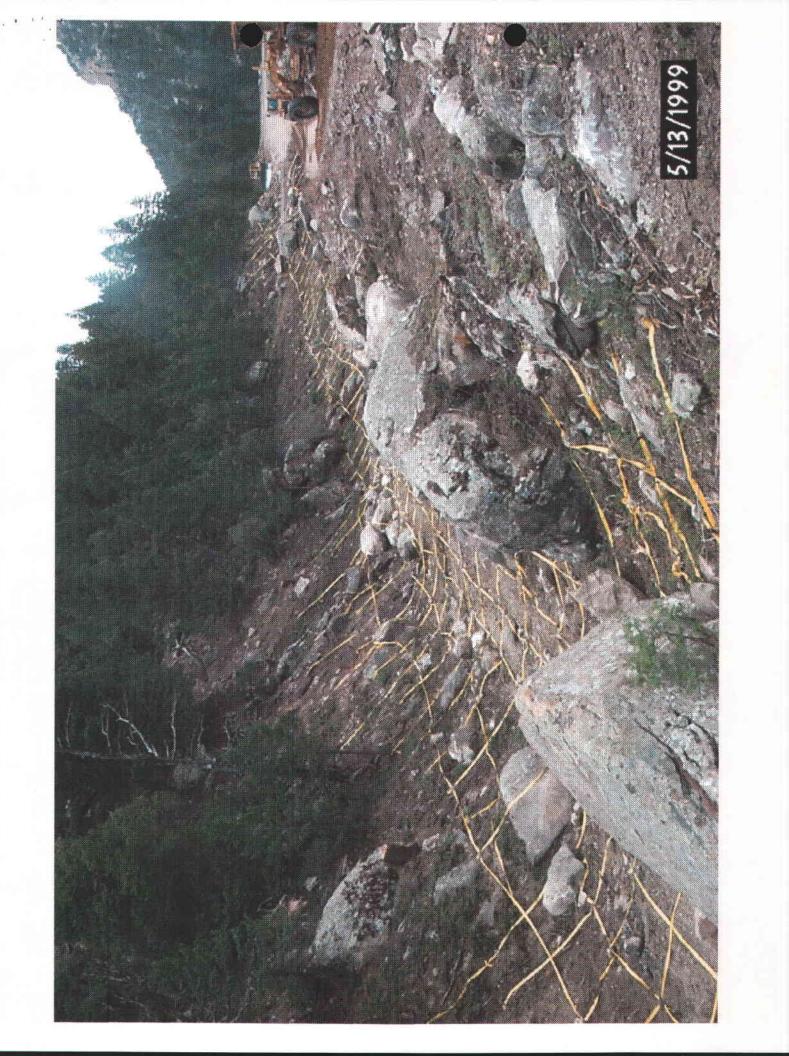


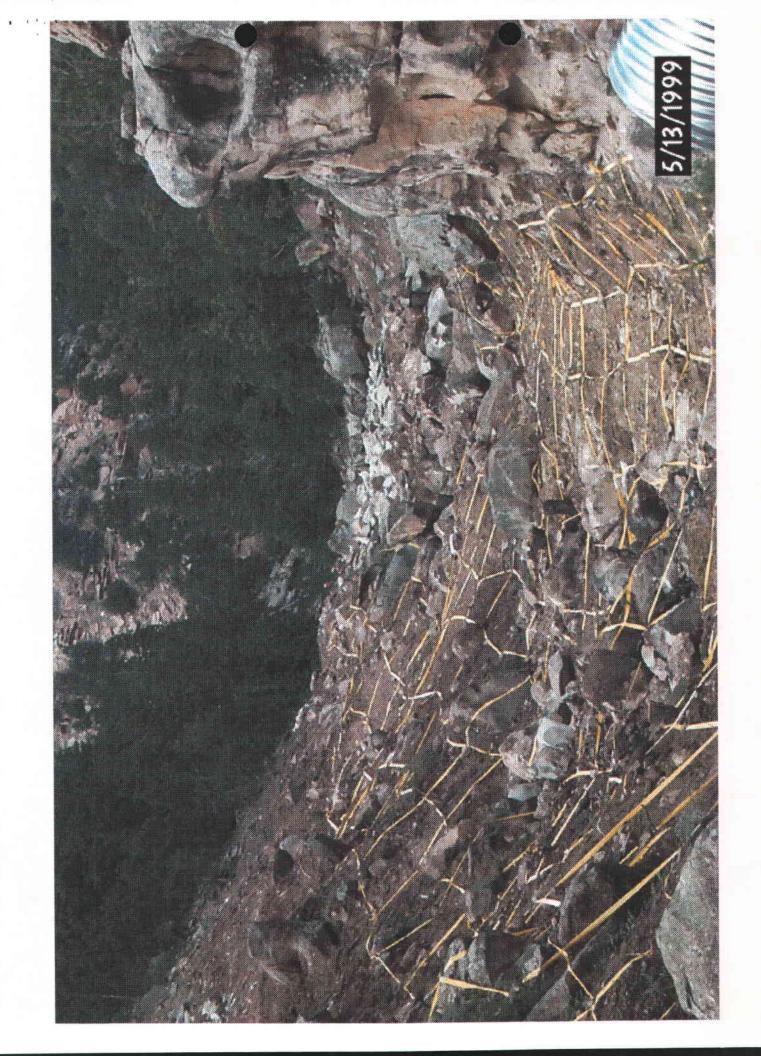


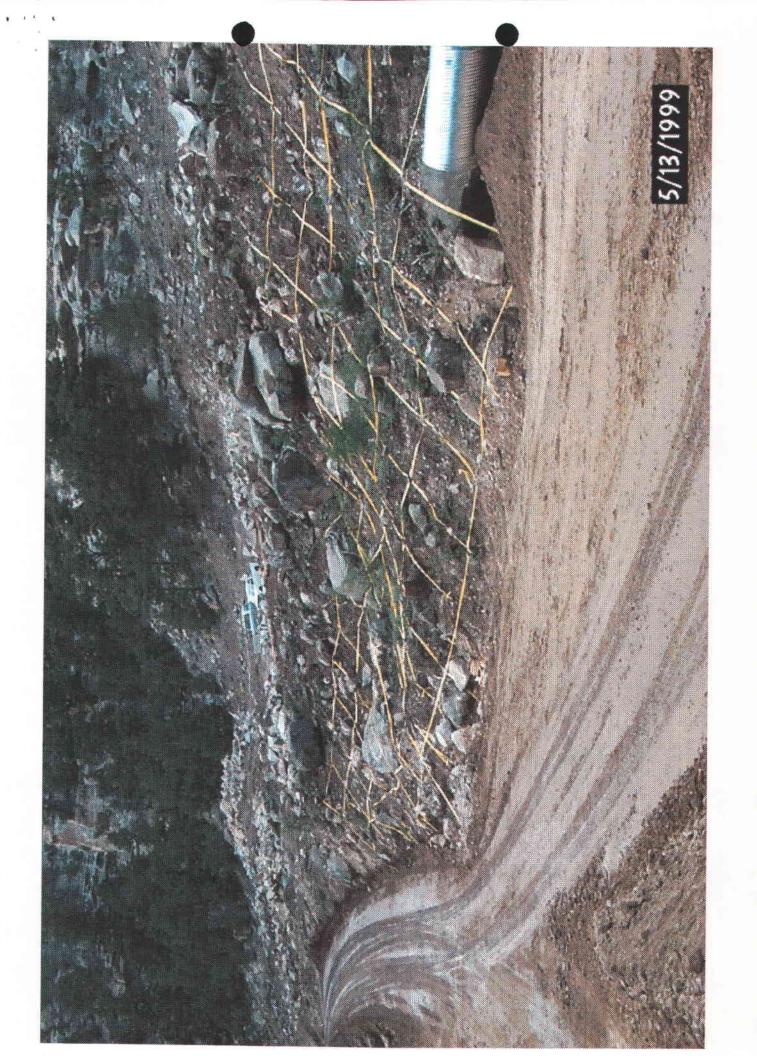


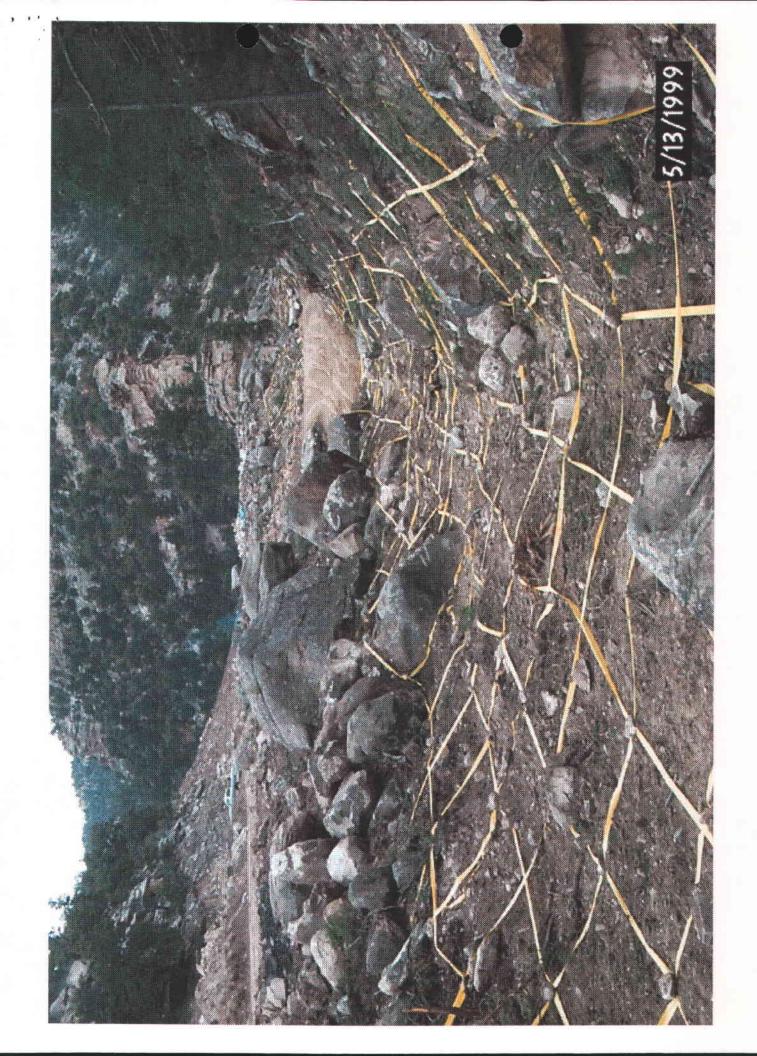


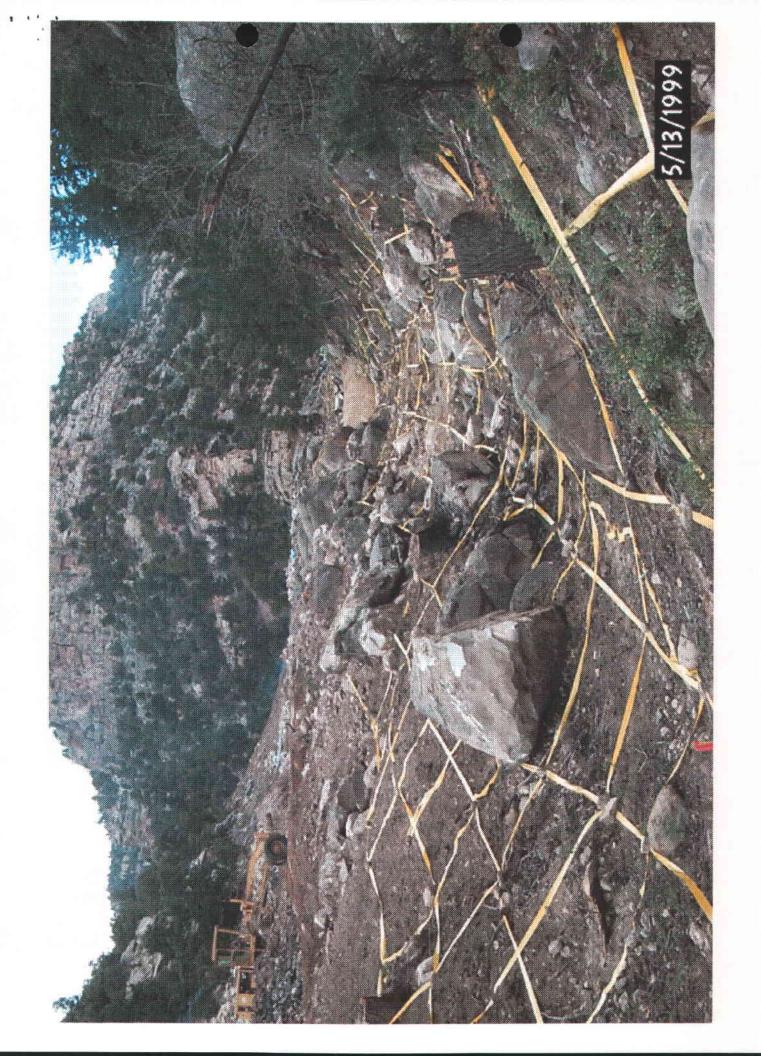


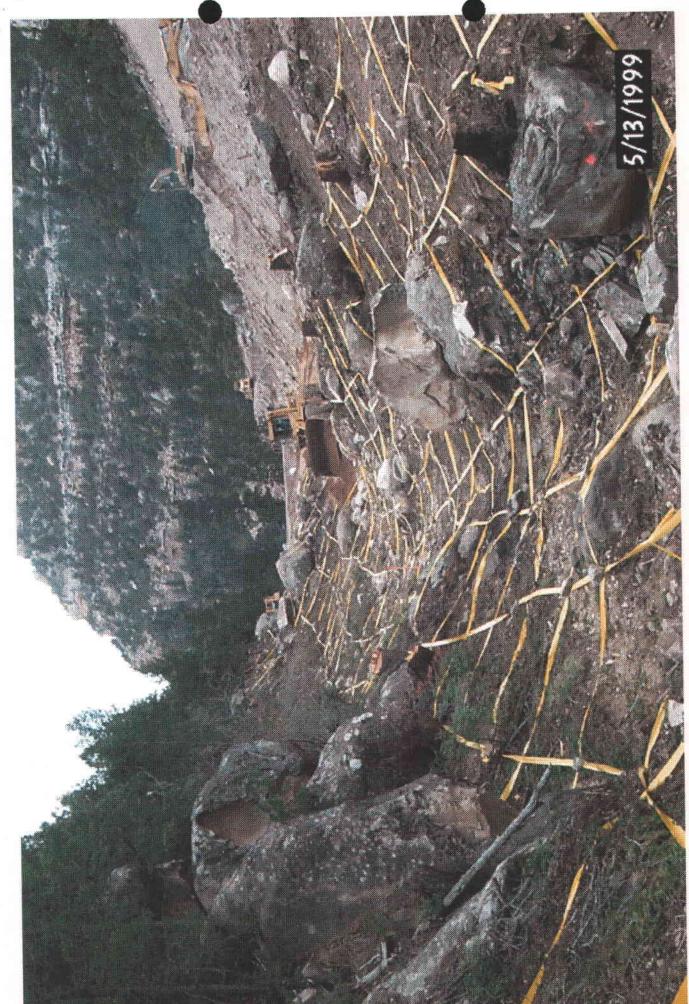












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